

WASHINGTON, D. C. 20505

Director

26 OCT 1979

MEMORANDUM FOR:

[redacted]  
Secretary, Executive Committee

FROM : Bruce C. Clarke, Jr.

SUBJECT : Agency Long-Range Planning [redacted]

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1. Over the past several months, in response to Executive Committee (ExCom) guidance provided at the 11 April meeting, the NFAC has been developing a list of candidate critical long-range problems that the Agency will have to address over the next decade (Attachment 1). During the course of this activity it has become apparent that we are unaccustomed to thinking in the terms required for long-range planning. It is now obvious that the NFAC must take additional steps to fully develop an intelligence-driven, long-range problem set, and a mechanism for attacking them, before we can be of help to the DDS&T and the DDO in their own long-range planning efforts. [redacted]

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2. In order to get this process started in the NFAC, I intend to take the following steps over the next several weeks:

a. I will meet with my office directors to review and discuss the problems that have been identified. Criteria must be developed for distilling the problem set to the most important problems and to examine approaches for the NFAC to use in our long-range planning.

b. The office directors will be asked to identify individuals in their offices for the purpose of assembling a small group in each office to refine the problem set.

c. With the assistance of my office directors, four to six individuals from these office working groups will be selected to form a core group for developing the NFAC planning process to continue this effort. [redacted]

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3. Considerable attention also has been given to developing a flexible long-range collection strategy for attacking the large number and variety of intelligence problems that have been identified. Continuation of the Pilot Collection Program (PCP) approach would require that only a few problems be selected from the many facing the NFAC. An alternate approach to the PCPs is presented in Attachment 2 which provides a more comprehensive concept of addressing our problems. I believe that this approach will be more cost-effective, and allow us more flexibility in the use of the Agency's limited resources. [REDACTED]

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4. Reports on our progress will be made to the ExCom over the next several months. Once sufficient progress has been made in the NFAC on this effort, it would be of help to us if representatives from the D/O and D/S&T would review our work and assist us in planning our course of action. One or two individuals from each directorate would be suitable for this interaction. [REDACTED]

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Bruce C. Clarke, Jr.

Attachments:

1. Candidate Long-Range Intelligence Problems
2. Long-Range Collection and Production Planning

CANDIDATE LONG-RANGE INTELLIGENCE PROBLEMS

SOVIET UNION

\*1. Balance of Power. The Soviet Union continues to increase the capabilities of their strategic weapons systems and may, during the next decade, obtain offensive weapon superiority over the United States. It is vital to assess what changes would take place in the areas of Soviet foreign policy goals, objectives and strategy were this superiority to take place and what action needs to be taken to counter these changes.

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\*2. Camouflage, Concealment, and Deception--the Effect on Intelligence Production. We have long recognized that the Soviet Union has expressed a basic policy wherein deception is a major goal in all military and political activities. Many instances of deception applications have been observed, although usually in isolated occurrences. It can be anticipated, however, that the USSR has the capability to engage in widespread, organized, and comprehensive deception practices if they should decide that the advantages will offset the costs in terms of resource and program inefficiencies. Should this occur, the Intelligence Community needs to understand how and where intelligence production will be affected, and take steps to nullify the effects of deception activities if necessary.

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\*3. Indications and Warning. Over the past several years, the Soviet Union has been able to greatly increase their knowledge of the US Intelligence Community's collection capabilities. As a result of this recent knowledge, they will undoubtedly make a number of changes in operating procedures for both their offensive and defensive programs. The Intelligence Community needs to assess how these changes will affect our I&W capabilities and what action needs to be taken to counter these changes.

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\*4. Nuclear Weapons Research, Development, Testing and Production. The Soviet Union will remain the single greatest threat to the US security interests for the foreseeable future. Soviet nuclear weapon capabilities will continue to be central to this threat.

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\*5. Treaty Monitoring. We will have to monitor treaties such as SALT II and possibly SALT III as well as other treaties such as the ASAT and CTBT. Effective monitoring of these types of treaties will require integrated efforts of a variety of collection and analysis assets.

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\*Problems which appear to merit additional attention.

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\*6. Future Military Systems. Intelligence projections of future Soviet military systems, especially for aerospace defense, are critically important to US defense policymakers for their impact on SALT as well as on US weapon decisions. Of particular concern are the technological options open to the Soviets to improve their ability to counter the present and projected US low-altitude air-breathing missile threat and the time frame when relevant systems may enter the inventory.

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7. Applied Sciences and Emerging Technologies. Present day physical and life sciences and emerging technologies can be expected to contribute to future civilian and military systems developments and perhaps form the basis for the emergence of military and economic threats. Of particular concern are foreign, notably Soviet, science and technology policies, research capabilities and activities in the physical sciences and advanced technologies, as well as the transfer of technology to the USSR and its assimilation there.

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8. Biological/Chemical Warfare. Independent judgments are continually being sought on a range of assessments on the current BW/CW threat to NATO and in support of CW treaty negotiations

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\*9. Military Technology Developments. Extremely important policy questions in US strategic posture hinge on Soviet capabilities in advanced technologies in a number of key areas such as:

a. Acoustic and non-acoustic technologies applicable to ASW and their impact on future Soviet ASW force capabilities.

b. Directed energy, including the pace, scope and direction of Soviet programs and likely availability dates of potential directed energy weapon systems.

c. Microelectronics and the application of this technology to military systems. New Soviet weapon systems will depend on improvements in onboard electronics for their effectiveness.

d. Advances in inertial guidance components are of particular relevance in understanding Soviet efforts to improve missile accuracy. Such developments as maneuvering reentry vehicles and homing cruise missiles would further threaten the US land-based missile force.

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e. Soviet defense developments indicate that they are making progress in improving their defenses against penetration at low altitudes. We must monitor their activities over the next 5-10 years very closely to determine whether they can develop effective counter-measures to US weapons like the cruise missile.

f. Effectiveness of Soviet ABM and ASAT efforts may be curtailed somewhat by arms agreements, but the Soviets continue to conduct R&D programs in these areas. We must be able to assess the results of these programs which will incorporate higher forms of technology in future years. [REDACTED] 25

\*10. Soviet Reliance on Spacecraft and Their Vulnerabilities.

The Soviets are expected to continue their emphasis on space with improved systems for intelligence gathering, warning and weapons support. [REDACTED] 25

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11. The general area relating to Soviet science policy (as opposed to analysis of specific S&T disciplines or areas) that governs current and will govern future performance of Soviet S&T, including military research and development will continue to be of major concern. The performance of the Soviet S&T community is a major key to USSR's policy and capabilities because its leadership heavily depends on that performance for the implementation of its policies at home and abroad. The future performance of that community (including military R&D and production) will be specifically affected by a number of developing systemic and societal problems such as: the impact of increasing, already-pervasive Party rule on the S&T community; the changing composition of the nationalities and the growing social stratification with their impact on the training, utilization and attitudes of future Soviet S&T personnel; the growing complexity of inter-elite group relations (e.g., between the S&T community on the one hand, and the Soviet military, governmental bureaucracy, and the Party apparatus on the other); the demographic changes with the resulting implications of upcoming labor shortages; the effect of looming generational changes on the Soviet S&T hierarchy and ranks; the problem of misemployment of Soviet S&T personnel; organizational problems related to interactions among the Academy of Sciences, the ministries, the State Committee for Science and Technology, and Gosplan.

Consideration should also be given to unique policy concerns pertaining to the relationships of the Academy of Science to the Academy of Medical Science, the Ministry of Health and the military medical academies with regard to research and development, development of health care delivery systems and health and environmental regulations. [REDACTED] 25X

12. Soviet dependence on foreign (and particularly US) science and technology will be a key issue during the next decade. Analysis of this question would further illuminate the amount and kind of possible leverage the US might have in influencing Soviet internal and external policies and developments affecting US national interests and security. Such an analysis could also contribute to our assessment of current and future Soviet military capabilities. [REDACTED] 25X

\*13. Domestic Stability. The Brezhnev regime may very well have mortgaged future for current stability in the political, social, and cultural spheres by striving generally to preserve the status quo, pursuing a nondisruptive incrementalism to achieve modest improvements, and avoiding the really hard issues. While the prospects for continued stability in the short run (3-5 years) are relatively good, in the long term the cumulative effects of two decades of conservatism will be felt in several areas that are key to the regime's stability. The most salient of these areas, which will require close monitoring through intensified collection and analytical efforts, are the following:

- a. A generational change in the Soviet political elite, that could result in a regime more dynamic, aggressive, and possibly threatening to Western interests;
- b. Severe economic resource strains, exacerbated by growing consumer expectations, that will require adjustments in economic, military and foreign policy priorities;
- c. Worsening demographic trends that could result in social and labor dislocations, intensification of nationalist antagonisms, and military discipline problems; and
- d. Increased popular demand for freer movement of people and ideas (human rights) and closer observance of the letter of the law, under the influence of international norms. [REDACTED]

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#### CHINA

\*1. Nuclear Weapons Research, Development, Testing and Production. Essential to PRC military capabilities, which have significant growth potential, is the growing nuclear component. [REDACTED] 25X1

\*2. Missile and Space Programs. China's missile and space programs have been limping along for a number of years. However, there are recent signs of increased activity in both areas. We expect the quality and quantity of these systems to reach threatening levels over the next decade. [REDACTED]

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3. Science and Technology Policies, Strategies and Developments. Policy and strategy may be determinants of long-range trends in China's technological development. S&T developments, including the assimilation of both indigenous and imported technology derived from both the physical and life sciences, will provide the base for the modernization of China's industry and the military. [REDACTED]

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4. Domestic Stability. The PRC's record for preserving political stability is not one which encourages predictions of long-term tranquility. The death of Mao Zedong in 1976 and the ensuing purge of his radical supporters, however, have brought about a major change in the character of domestic politics in China. The new leadership, though still itself divided over several fundamental issues, is firmly committed to setting China on a course of stable economic growth and prosperity and has vowed to abandon the kind of mass mobilization campaigns that so disrupted political and economic routines in the past. To preserve their rather fragile political unity, however, the leadership has tended to avoid the most difficult policy decisions and postpone making a clean and complete break with the past. While this probably has been necessary to avoid a serious collapse of authority, it has heightened tensions within the leadership itself, and hobbled the bureaucracy in dealing with the accumulated problems of 20 years of Mao's misrule. While it is unlikely that the political infighting that still characterizes the regime will lead to widespread instability in the short term (3-5 years), it will continue to have a negative effect on the regime's ability to deal effectively with the more serious problems confronting it. These problems, which merit increased collection and analytical efforts, include the following:

a. The grooming and promotion of capable, young leaders to replace the current gerontocracy;

b. The continued alienation of many young people and intellectuals, angered over past treatment and pessimistic about the current government's ability to deal with China's problems;

c. The continuation of serious economic problems, compounded by a weak infrastructure, insufficient planning, bureaucratic inertia, inept management and rising consumer expectations;

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d. Increased demand for greater personal freedom in such areas as employment, education, residence and political expression and for a more responsive, less repressive government apparatus; and

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e. Demographic and social pressures resulting from a relatively young population of nearly one billion.

#### NON-SOVIET

1. Nuclear Proliferation. The potential destabilizing effects on regional and world geopolitical balances of nuclear weapons development by states that now have no nuclear weapons will continue to be of major concern to US administrations. Specific areas of concern over the next decade will be:

a. Early detection and monitoring of clandestine nuclear weapons programs [redacted] that might be developed by North Korea, Iraq, Libya, Iran, and perhaps others.

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25X6 b. Monitoring the nuclear weapons-related activities and intentions of increasingly capable countries (including [redacted])

c. Assessing the institutional perceptions, individual attitudes, and particular objectives that will govern changes in policy toward the development, deployment and employment of nuclear weapons. [redacted]

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2. Nuclear Power Technology. The entire gamut from fuel production and fabrication, reactor design, and fuel reprocessing to waste storage will remain high-priority issues. [redacted]

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25X1 3. Technology Transfer. The Less Developed Countries (LDC) have seized on the issue of technology as a key to their future progress. Important policy decisions related to this issue will require intelligence on LDC technology needs, acquisition strategies, and assimilation of technology, and policies of the industrialized nations toward such transfer. [redacted]

4. Civil Technologies. Technological advances of future economic or political significance to the US are of increasing concern to those at the national-level responsible for policy review and decisions. Areas



of particular interest include science policy and technology strategies of the industrialized nations, focusing on national R&D programs, innovation, international S&T cooperation and industrial policies; [redacted]

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[redacted]

6. Biomedical Sciences. Foreign, notably Soviet, activities in or related to the biomedical sciences continue to be of great interest to a wide range of US policymakers. Of concern are the biomedical implications of operations in space; implications of the radiobiological effects of devices emitting radiation; impact of advanced biological techniques (e.g., recombinant DNA) on industry, agriculture, medicine and possibly military capabilities; the extent and nature of biomedical support for military operations and civil defense; and to population control techniques and to export by several countries, notably the USSR and China, of health care delivery systems to third world countries as a means of gaining influence. [redacted]

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\*7. Monitoring of Social Change and Political Stability of Foreign Countries. Cross-cultural indicators of social changes need to be identified so that the relationships between social change and political stability can be developed. Methodologies are needed that address the questions of change and stability. At this point, it is not known what social changes really are or how they can best be measured. The ideal program would be one that resulted in a model of relevant factors associated with social change. This model would be based upon valid empirical indicators which could be easily updated by the analyst, and would aggregate to some set of overall measures of political and social stability that could be maintained over time. [redacted]

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8. African Stability:

a. Long-term effects of climatic variations in Africa and similar type regions. Good crop years presumably have some effects on the political situations (short-term) and on social changes (long-term) such as population movements, rates of reproduction, styles of life, satisfaction with social forms, etc. Such concerns are likely to be of greater importance to us as our interdependence with these less insulated peoples grows.

b. Longer-term intellectual and ideological currents in Africa and the Third World. The disappointments and frustrations that the political and social elites of these regions will inevitably encounter are likely to affect, in various ways and to various degrees, their images of themselves, of us, and of how we got into the kinds of relationships we have. Marxism of various kinds have been the main going thing for at least the past 50 years. As Marxist formulas fail to produce the desired results, something else (worse, from our standpoint?) is likely to come along. Whatever it is, it will have resonance in the rest of the world and color the nature of our relationships in the future.

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9. Food and Nutrition Prospects. Agrotechnological capabilities of nations and the limits of scientific and technological improvements attainable in food production affect significantly the availability of food and are of particular interest in regard to countries of high US political concern.

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11. Rising energy costs and potential future shortages of conventional energy supplies (oil, gas, etc.) are placing increased priority on the development of alternative energy technologies, technologies for the utilization of fossil fuels (coal conversion, oil shale, etc.) largely untapped at the present time and non-petroleum energy technologies (solar, wind, geothermal, etc.). Foreign countries may emerge as leaders in the development or commercial application of these technologies. Some of these technologies may also serve as important diplomatic levers in establishing international S&T cooperation and in improving relations with the developing world. [REDACTED]

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\*12. International Monetary System. Pressures will continue to build on the international monetary system over the next several years as it tries to cope, inter alia, with periodic bouts of dollar weakness, the impact of higher oil prices and attendant growth, inflation, trade and debt problems. [REDACTED]

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\*13. Growth, Inflation and Trade. As the world moves into a period of energy-inspired lower growth and higher inflation, countries will be faced with adjustments in economic policy that will be disruptive to industrial nations and LDCs alike. These will have a profound effect on US policy. The trade effects will be increasingly important as the US competitive position continues to erode. [REDACTED]

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#### GENERAL PRODUCTION AND ANALYSIS

\*1. Requirements to Store, Manipulate, Disseminate, and Display Large Volumes of Data. As new SIGINT, imaging, and other collection systems become operational we will be faced with handling even larger volumes of data. Our ability to exploit these data will depend on having the proper tools and facilities. There also is a need for having more intelligence originate in machine-readable form, for more sophisticated ways of manipulating and retrieving data and for more accurate and more rapid means of disseminating information. [REDACTED]

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2. Lack of Resources to Analyze Tactical Weapons and Ground Force Weapons System. There is an increasing requirement for analysis of tactical and ground force weapons systems. At the same time, the requirements for strategic weapons analyses increase. Consequently, we face a crisis in resource allocation which must be resolved if we are to handle both problems effectively. [REDACTED] 25

\*3. Long-Term Intelligence Problems. While there appears to be general agreement that the Intelligence Community should project its resource needs (especially for long-lead-time programs) for at least 5-10 years in the future, attempts to do so have been ad hoc and fragmentary. This is particularly true for defining the long-term intelligence problems which should form the basis for all resource planning. An organizational and methodological approach needs to be developed and established for the purpose of identifying our future needs in terms which will allow realistic program planning through the next decade. [REDACTED] 25X1

\*4. The Elements of Intelligence Analysis. In order to make more efficient use of our existing analytical resources, to improve training and recruiting, to develop better computer support and other aids to analysis, and to more realistically accomplish planning for the future within NFAC, it is important to better understand the analytical processes. The feasibility of describing these processes in greater detail than heretofore should be examined. If feasible, a continuing project should be established for identifying elements of intelligence analysis, for determining practical approaches for improving our analytical posture, and for implementing these approaches. [REDACTED] 25X1

5. Development of Increased In-house Analytic Resources: The increased cost of external manpower, institutional biases developing in some contractors, the cost of TDYs, and the need for the Agency to maintain an independent perspective in an increasingly polarized community will require greater reliance on and development of in-house resources, both manpower and equipment, except where state-of-the-art external expertise is absolutely required. [REDACTED] 25

PURPOSE

To develop an approach to long-range planning which is comprehensive in terms of the collection and production of intelligence, and emphasizes efficient use of resources. [REDACTED]

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SUMMARY

The PCP approach, by its very nature, requires that a few problems be selected from the many facing NFAC. Limited collection resources are then focused on those selected problems, if not to the exclusion of the remaining problems, at least to their detriment. Such an approach is good, if a few problems stand out as being far and away critically more important and of greater interest than all the others. This does not appear to be the case. Of the 35 problems identified, we are hard-pressed to select a few which affect national security, or even national interest, to a markedly greater extent than the others. This indicates that a collection strategy needs to be developed and implemented for attacking as many different problems as possible. By first identifying the intelligence problems which will confront us in the future, then defining overall collection strategies, and finally developing collection assets which can satisfy data requirements for many of the future problems, it will not be necessary or appropriate to artificially limit our attention to a small fraction of our future needs. A broad, comprehensive planning approach is recommended in this paper that will be more cost effective than the continued use of the PCP approach. [REDACTED]

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RECOMMENDATIONS

--The NFAC establish a small, dedicated working group to begin work on long-range planning for production and analysis. The main task would be to develop a realistic intelligence "future" to be used to derive an intelligence-driven, long-range problem set. Once completed, it can be used as guidance for formulating the Agency's long-range plans for production and administration as well as human and technical collection. [REDACTED]

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--The ExCom approve and support the development of a flexible long-range collection strategy that:

- . is based upon the knowledge gained over the past four years from using the PCP approach;
- . is capable of attacking a number of intelligence problems simultaneously;

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- . makes the maximum use of current and projected assets; and
- . can be developed within the limited resources that the Agency will have during the next decade.

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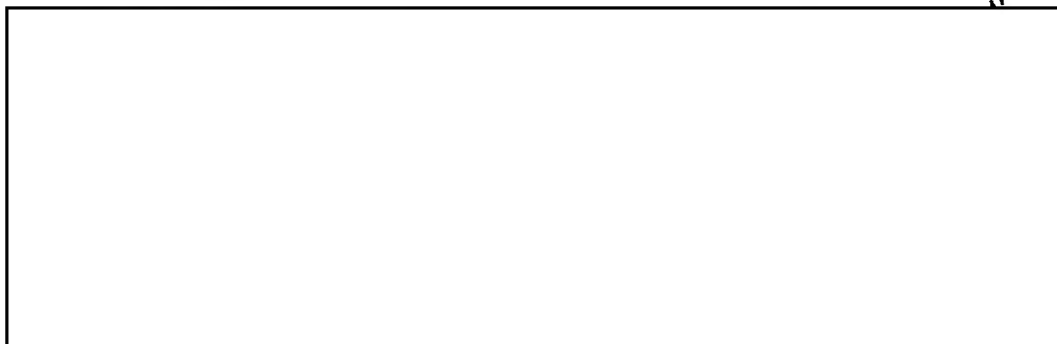
### DISCUSSION

The primary approach to solving critical intelligence problems has been to focus high-level attention on them and to apply more resources. The PCP approach is a current example of using this technique for problem solving. It has served to:

- . define and describe these intelligence problems;
- . perform detailed target analysis to determine possible vulnerabilities to collection;
- . encourage and support new collection initiatives;
- . fine tune existing analysis and collection techniques; and
- . assure adequate management attention.

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Several factors become evident while reviewing the report written by the ExCom Staff on the effectiveness of this approach against the two current PCP problems.



Therefore, only a few highest priority problems requiring these particular kinds of collection can be handled simultaneously. Since the senior staff of the NFAC identified more than a dozen Soviet problems they believed needed the attention of senior Agency management to solve, it is readily apparent the Agency needs to develop a long range collection strategy that is capable of:

- (1) attacking a number of problems simultaneously;
- (2) making the maximum use of assets, both those that presently exist and those that are currently under development; and
- (3) being implemented within the limited resources that the Agency will have during the next decade.

c. Not all problems lend themselves to being attacked by the PCP approach. Unless other methods of attacking them are developed, the needed intelligence may never be collected. The problem sets need to be studied to develop collection strategies that address most, if not all, of the problems. Critical problems for which potential solutions cannot be found may need special treatment.

d. It probably takes about five years for a PCP effort to pay off. [REDACTED]

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[REDACTED] Thus there is no apparent time advantage to concentrating resources on a specific target if other collection approaches with much broader capabilities could be developed in the same length of time. [REDACTED]

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These limitations need to be taken into account when consideration is being given to developing methods to attack critical, long-term intelligence problems. It is clear that the Agency does not have the resources to attack more than one additional Soviet problem using the PCP approach. Yet a number of high-priority Soviet problems have been identified that need to be addressed by the Agency during the next decade. The only reasonable solution is for the Agency to develop and implement a flexible long-range collection strategy for attacking the number and variety of intelligence problems that have been and will continue to be identified. [REDACTED]

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The NFAC must take the lead in beginning the planning cycle which will ultimately lead to the Agency being in the best possible position to answer critical intelligence questions. Steps that should be taken are the development of:

- a realistic intelligence "future," derived from data provided by NFAC offices and presented in a manner conducive to R&D and resource planning;

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- an intelligence-driven long-range problem set closely meshed with the Agency's mission and objectives;
- a prioritized target list based upon the value of the intelligence expected to be collected;
- a comprehensive collection strategy to attack the critical problems; and
- the necessary procedures for implementing the strategy developed.

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